What is claimed is:

1. A method for manufacturing a liquid crystal display device comprising:

forming a gate electrode over a substrate;

consecutively forming a gate insulating layer and an active layer over the gate electrode;

depositing a photoresist over the active layer and performing a photolithography process to form a first photoresist pattern, and then removing the active layer formed at a source/drain region;

ashing the first photoresist pattern to expose a part of an active region;

forming a source/drain electrode at the source/drain region;

forming a passivation layer on the substrate including the source/drain electrode;

forming a second photoresist pattern that exposes a pixel region on the passivation layer;

forming a pixel region by using the second photoresist pattern as a mask;

side-etching a part of the passivation layer thus to expose a part of the drain electrode;

forming a pixel electrode material over the second photoresist pattern and the pixel region; and

simultaneously removing the second photoresist pattern and the pixel electrode material formed thereon to form a pixel electrode.

2. The method of claim 1, wherein the step of removing the active layer formed at the source/drain region comprises:

depositing a photoresist over the active layer;

applying a mask to the photoresist, exposing, developing, and thereby forming a photoresist pattern where the source/drain region is defined; and

applying the photoresist pattern as a mask.

3. The method of claim 1, wherein the step for forming the active layer comprises:

forming a semiconductor layer over the gate insulating layer; and

forming a high-concentration impurity layer over the semiconductor layer.

4. The method of claim 1, wherein the step of forming the source/drain electrode at the source/drain region comprises:

forming a conductive layer over the photoresist pattern where the source/drain region is defined;

simultaneously removing the photoresist pattern and the conductive layer formed thereon by a lift-off process; and

removing the high-concentrated impurity layer formed above the channel region.

5. The method of claim 4, wherein the photoresist pattern is formed above the channel region and the pixel region.

6. The method of claim 1, wherein in the step for side-etching a part of the passivation layer thus to expose a part of the drain electrode, the passivation layer is side-etched by using fluorine-containing gas.

7. The method of claim 1, wherein the step for side-etching a part of the passivation layer to expose a part of the drain electrode further comprises removing a part of the active layer remaining at a side surface of the source electrode by side-etching.

8. The method of claim 7, wherein the active layer is removed by using chlorine ion-containing gas.

9. The method of claim 1, wherein the pixel electrode material and the photoresist pattern formed thereunder are simultaneously removed by a lift-off process.

10. The method of claim 1, wherein in the step for forming a pixel electrode material on the photoresist pattern and the pixel region, the pixel electrode material is formed over a part of the drain electrode.

11. The method of claim 1, wherein the step for ashing the first photoresist pattern thus to expose a part of an active region further comprises exposing a part of a high-concentrated impurity layer of the active region by oxidizing a part of the photoresist with oxygen ion-containing plasma gas.

12. The method of claim 1, wherein the step for applying a second photoresist pattern as a mask thus to form a pixel region comprises sequentially removing the passivation layer and the active layer formed at the pixel region.

13. The method of claim 12, wherein the step for applying a second photoresist pattern as a mask thus to form a pixel region further comprises removing the gate insulating layer formed at the pixel region.

14. A method for manufacturing a semiconductor device comprising:

providing a substrate;

forming a photoresist layer over the substrate;

forming a conductive layer over the photoresist layer; and

simultaneously removing the photoresist layer and the conductive layer.

15. The method of claim 14, wherein the photoresist is a positive photoresist or a negative photoresist.

16. The method of claim 14, wherein the conductive layer is formed from a metal or metal oxide.

17. The method of claim 14, wherein the step of simultaneously removing the photoresist layer and the conductive layer is performed by etching.